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Legal Department, DL429  
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ATTORNEY DOCKET NO. 10001932-1

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Baney, et al

Serial No.: 10/081,102

Examiner: Nguyen, Tu

Filing Date: February 20, 2002

Group Art Unit: 2877

Title: Coherent Analyzer for Multi Port Optical Networks

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COMMISSIONER FOR PATENTS  
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TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith in *triplicate* is the Appeal Brief in this application with respect to the Notice of Appeal filed on 4/1/04.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$330.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

☐ (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)(1)-(5)) for the total number of months checked below:

<input type="checkbox"/>	one month	\$ 110.00
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<input type="checkbox"/>	three months	\$ 950.00
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☐ The extension fee has already been filled in this application.

☒ (b) Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

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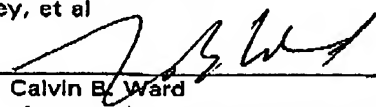
Date of Facsimile: 4/1/04

Typed Name: Calvin Ward

Signature: 

Respectfully submitted,  
Baney, et al

By

  
Calvin B. Ward  
Attorney/Agent for Applicant(s)

Reg. No. 30,896

Date: April 1, 2004

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Attorney/Agent for Applicant(s)

Reg. No. 30,896

Date: April 1, 2004

Telephone No. (925) 855-0413

**PATENT APPLICATION**

Attorney Docket: 10001932-1

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF APPEALS**

Applicant: Baney, et al  
Serial No.: 10/081,102  
Filed: 2/20/2002  
For: Coherent Analyzer for Multi-  
Port Optical Networks  
Group Art Unit: 2877  
Examiner: Nguyen, Tu T

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**OFFICIAL****BRIEF FOR APPELLANT**

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Sir:

This is an appeal from the decision of the Primary Examiner dated Feb. 24, 2004,  
finally rejecting Claims 1-9 in the above-identified patent application.

**I. REAL PARTY IN INTEREST**

The real party in interest is Agilent Technologies, Inc. having an address as shown  
below.

**II. RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to Applicant, or Applicant's legal  
representative, or assignee which will directly affect or be directly affected by or have a  
bearing on the Board's decision in this pending appeal.

**III. STATUS OF THE CLAIMS**

Claims 1-9 are currently pending in the above-identified patent application. In the Office Action dated 2/24/2004, the Examiner rejected Claims 1-9 and indicated that the Action was final.

#### **IV. STATUS OF AMENDMENTS**

There have been no amendments filed since the above-described final rejection.

#### **V. SUMMARY OF THE INVENTION**

The present invention may be more easily understood with reference to Figure 1 and the discussion thereof that begins on Page 3 at line 11. The present invention is an optical interface device for use in testing a device[20] for its response to a stimulus signal. The interface includes a stimulus input port for receiving a light signal from a light source such as laser 21. This light signal is used to generate a stimulus signal and a reference signal. In the case of the embodiment shown in Figure 1, the generation of the stimulus and reference signals is performed by coupler 11 whose input corresponds to the stimulus input port of Claim 1. This embodiment has a test signal output port that is connected to detector 22, and two device test ports that are connected to DUT 20. Each device test port couples a light signal from the interface to a port of a device under test, and couples a light signal from the port of the device under test to the interface. A first optical switch routes the stimulus signal to one of the device test ports, the first optical switch having one output port corresponding to each of the device test ports that is capable of coupling the stimulus signal to a device under test. A second optical switch routes a light signal from the device under test to the test signal output port. The second optical switch has a plurality of input ports, each input port being connected to a corresponding one of the device test ports, and a switch output port coupled to the test signal output port. The interface utilizes a plurality of optical routers that are shown at 16 and 17. There is one router corresponding to each of the device test ports. Each optical router connects an output of the first optical switch to a corresponding one of the device test ports and connects that device test port to a corresponding one of the second optical switch input ports. The output of the optical routers also provides a signal related to the intensity of the light signal leaving the device test port for use in correcting the data for variations in intensity in the stimulus light signal. The interface may include an optical delay circuit[13] for generating an optical delay between the reference signal and the stimulus signal. The reference signal is preferably combined within the interface with the signal leaving the switch

output port of the second optical switch prior to that signal being coupled to the test signal output port. The interface may also include a polarization synthesizer as shown in Figure 2 at 59 for setting the polarization state of the stimulus signal.

## **VI. ISSUES**

Are Claims 1-9 obvious under 35 U.S.C. 103(a) in view of Bloom (5,764,348).

## **VII. GROUPING OF CLAIMS**

The Claims are to be considered in 7 groups. The first group consists of Claims 1-3. The remaining claims are to be considered separately, i.e., one claim per group.

## **VIII. ARGUMENT**

### **A. Examiner's Burden.**

The Examiner has the burden of showing that there is some motivation in the art for altering the teachings of Bloom to arrive at the present invention as claimed. "The mere fact that a reference could be modified to produce the patented invention would not make the modification obvious unless it is suggested by the prior art." (*Libbey-Owens-Ford v. BOC Group*, 4 USPQ 2d 1097, 1103). "When the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference" (*In re Rijckaert*, 28 USPQ2d, 1955, 1957).

### **B. Rejection of Claims 1-3.**

In making this rejection, the Examiner looks to Figure 3 of Bloom as teaching a stimulus input port 40, a test signal output port 42, a plurality of device test ports and routers 38a-38j, and a light source, i.e., laser 14. The Examiner also identifies switches A and B as the first and second switches recited in the claim and device 10 as the device under test (DUT). The Examiner admits that Bloom does not explicitly disclose generating a reference and a stimulus signal. The Examiner attempts to overcome this lack of teaching by pointing to Figure 7B in which Bloom discloses connecting the DUT to a plurality of laser sources for providing different signals to perform different tasks. The Examiner maintains that it would be obvious to use laser 102 as shown in Figure 7B as the reference signal and the signal generated by laser 14 as the stimulus signal.

Even if one were to use the two laser version shown in Figure 7B, the resulting device does not satisfy the limitations of Claim 1. Claim 1 requires that the device generate a reference signal and a stimulus signal **from the light signal received at the stimulus port**. That is, the light signal received at port 40 in Bloom would need to be the source of both the stimulus and reference signals. The Examiner has failed to point to any teaching that would cause someone to modify the teachings in Bloom to arrive at such an arrangement. Furthermore, the Examiner has not pointed to any suggestion in Bloom or in the art that would cause someone of ordinary skill to modify the teachings of Bloom to provide the two signals in question from the signal received at port 40. Accordingly, Applicant submits that the Examiner has failed to make a *prima facie* case for obviousness with respect to Claim 1 and the claims dependent therefrom.

#### **C. Rejection of Claim 4.**

The Examiner admits that Bloom does not disclose the use of an optical circulator to replace one or more of the optical couplers taught in Bloom. The Examiner attempts to overcome this lack of teaching by stating that optical circulators are known to the art, and hence, it would be obvious to make the change to enhance testing. The Examiner's stated motivation is without substance, since it would be equivalent to the proposition that any element can be replaced by another element known to the art to enhance the operation of a device. The mere fact that an element is known in the art is not sufficient to sustain a rejection for obviousness. A statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte* Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). Hence, there are additional grounds for allowing Claim 4.

#### **D. Rejection of Claim 5.**

The Examiner admits that Bloom does not teach an optical delay circuit for generating a delay between the reference signal and the stimulus signal. Once again, the Examiner relies on the fact that an optical delay circuit is known. The Examiner does not point to any motivation, however, for introducing an optical delay between the reference signal and the

stimulus signal other than to state that "the motivation involves only routine skill in the art". Since the Examiner has not pointed to any teaching that would cause someone to include such an optical delay, Applicant submits that the Examiner has failed to make a *prima facie* case for obviousness with reference to Claim 5.

#### **E. Rejection of Claim 6.**

Claim 6 requires "an optical combiner for combining said reference signal with a signal leaving said switch output port of said second optical switch prior to that signal being coupled to said test signal output port". The Examiner admits that Bloom does not teach such an arrangement. Once again, the Examiner does not point to any motivation for introducing such an optical combiner other than to state that "the motivation involves only routine skill in the art". Since the Examiner has not pointed to any teaching that would cause someone to include such an optical combiner, Applicant submits that the Examiner has failed to make a *prima facie* case for obviousness with reference to Claim 6.

#### **F. Rejection of Claim 7.**

Claim 7 requires "a reference signal output port, said reference signal being coupled to said reference signal output port". First, as noted above, Bloom does not teach a reference signal. Hence, Bloom could not teach such an output port. The Examiner does not address this lack of teaching at all. Hence, Applicant submits that the Examiner has failed to make a *prima facie* case for obviousness with reference to Claim 7.

#### **G. Rejection of Claim 8.**

Claim 8 requires "a polarization synthesizer for setting the polarization state of said stimulus signal". The Examiner admits that Bloom does not teach such a synthesizer. Once again, the Examiner argues that such a device is known to the art and the motivation requires only routine skill. Hence, Applicant submits that the Examiner has failed to make a *prima facie* case for obviousness with reference to Claim 8.

#### **H. Rejection of Claim 9.**

Claim 9 requires "a polarization diversity receiver coupled to said test signal output port". The Examiner admits that Bloom does not teach such a receiver. Once again, the Examiner argues that such a device is known to the art and the motivation requires only

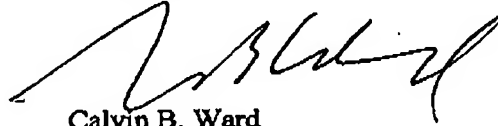
routine skill. Hence, Applicant submits that the Examiner has failed to make a *prima facie* case for obviousness with reference to Claim 9.

## VII. CONCLUSION

Applicant respectfully submits that for the reasons of fact and law argued herein, the decision of the Examiner in finally rejecting Claims 1-9 should be reversed.

I hereby certify that this paper (along with any others attached hereto) is being sent via facsimile to fax number: 703-872-9306

Respectfully Submitted,



Calvin B. Ward  
Registration No. 30,896  
Date: Apr. 1, 2004

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**APPENDIX****THE CLAIMS ON APPEAL:****1. An optical interface device comprising:**

a stimulus input port for receiving a light signal;

a test signal output port;

a plurality of device test ports, each device test port coupling ~~a light signal from said~~ interface to a port of a device under test;

a reference signal generator for generating a reference signal and a stimulus signal from said light signal;

a first optical switch for routing said stimulus signal to one of said device test ports, said first optical switch having one output port corresponding to each of said device test ports;

a second optical switch having a plurality of input ports, each input port being connected to a corresponding one of said device test ports, and a switch output port coupled to said test signal output port; and

a plurality of optical routers, one corresponding to each of said device test ports, each optical router connecting an output of said first optical switch to a corresponding one of said device test ports and connecting that device test port to a corresponding one of said second optical switch input ports.

**2. The interface of Claim 1 wherein one of said optical routers comprises an optical coupler.**

3. The interface of Claim 2 wherein an output of one of said optical routers provides a signal that is related in intensity to the intensity leaving said device test port corresponding to that one of said optical routers.

4. The interface of Claim 1 wherein one of said optical routers comprises an optical circulator.

5. The interface of Claim 1 further comprising an optical delay circuit for generating an optical delay between said reference signal and said stimulus signal;

6. The interface of Claim 1 further comprising an optical combiner for combining said reference signal with a signal leaving said switch output port of said second optical switch prior to that signal being coupled to said test signal output port.

7. The interface of Claim 1 further comprising a reference signal output port, said reference signal being coupled to said reference signal output port.

8. The interface of Claim 1 further comprising a polarization synthesizer for setting the polarization state of said stimulus signal.

9. The interface of Claim 1 further comprising a polarization diversity receiver coupled to said test signal output port.